GO BEYOND RNA
ARRAYSTAR INC

Study m6A Modifications Like Never Before

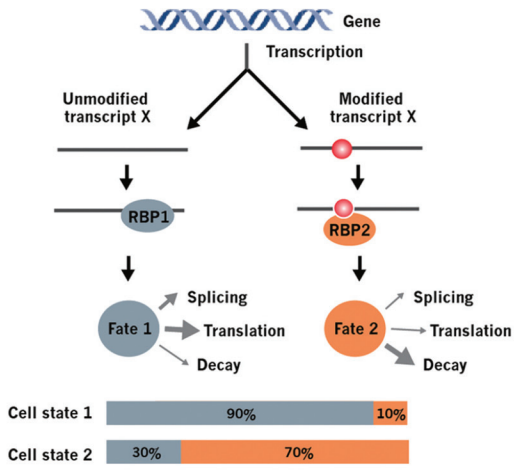

Fig. 1. m6A modified RNAs are immunoprecipitated and compared with the input RNAs in two-color channels of the Epitranscritomic Array to accurately measure the modification percentage and abundance level for each transcript. The percentage of modification of "transcript a" RNA determines its different cell fates, e.g. for protein translation or RNA decay.

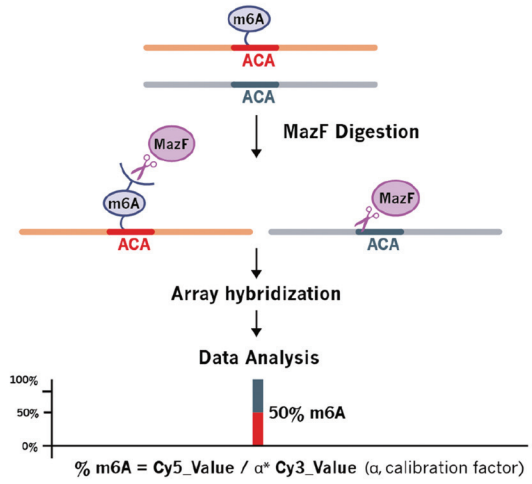

Fig. 2. Unmethylated (ACA) sites, but not methylated (m6ACA) sites, are cleaved by RNase MazF. The MazF treated and corresponding untreated sites are compared in two-color channels of the m6A Single Nucleotide Array to accurately quantify the m6A modification percentage, and abundance level at precise single nucleotide resolution.

Epitranscriptomic Array

- *Quantifying the percentage of modification for each transcript*
- *Coverage of mRNAs, lncRNAs, circRNAs and more*
- *RNA modifications at transcript-specific level*
- *Low sample amount, starting from 1 ug total RNA*

m6A Single Nucleotide Array

- *A new orthogonal methodology for m6A detection*
- *Single-Nucleotide resolution for m6A site location*
- *Quantifying the percentage of m6A site modification*
- *Reliable m6A site collection and systematic annotations*
- *Low sample amount, starting from 1 ug total RNA*

To learn more: **www.arraystar.com**

Preserve Diversity

Room Temperature RNA Preservation | Immediate Viral Inactivation

"Couldn't have done it without you."
L.K. - Human Research Program, NASA

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Stool

Tissue

Blood

Saliva

Urine

CFDA
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FDA U.S. FOOD & DRUG ADMINISTRATION
Class I exempt, #3014173039

European Commission
CE-IVD, Annex III
Self Declaration Directive 98/79/EC

Eurovir®
EN 14476:2017

Agência Nacional de Vigilância Sanitária
Class I, #81742570001

Horsington, J., et al. "Inactivation of foot-and-mouth disease virus...for safe transport and processing in low-containment labs" *Journal of virological methods.* **2020**

Bundgaard-Nielsen, C., et al. "Interpersonal variations in gut microbiota profiles supersedes the effects of differing fecal storage conditions." *Nature.* **2018**

Lalitha, P., et al. "Unbiased pathogen detection and host gene profiling for conjunctivitis." *Ophthalmology.* **2019**

Nowotny N, Kolodziejek J. Middle East respiratory syndrome coronavirus (MERS-CoV) in dromedary camels, Oman, 2013. *Euro Surveill.* **2014**

Galanti, M, Birger, R, Ud-Dean, M, et al. Longitudinal active sampling for respiratory viral infections across age groups. *Influenza Other Respi Viruses.* **2019**

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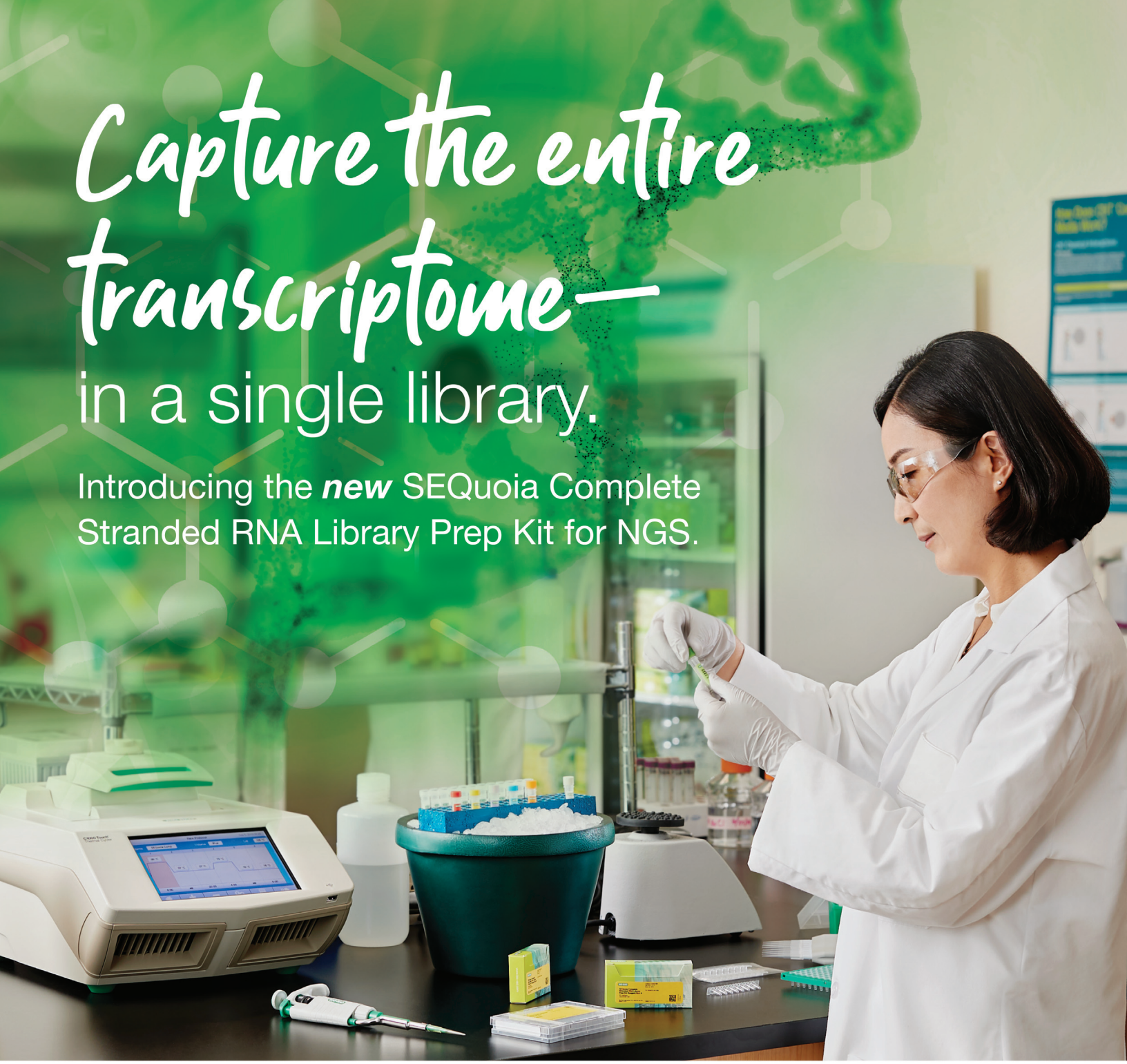

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Scot E. Dowd, PhD.
CEO and Laboratory Director

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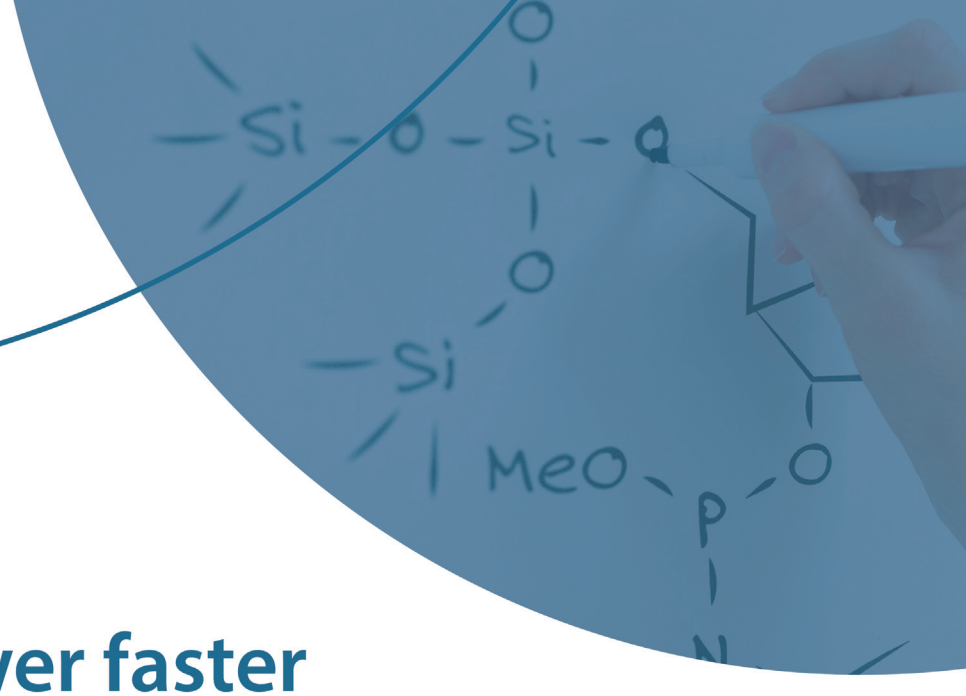


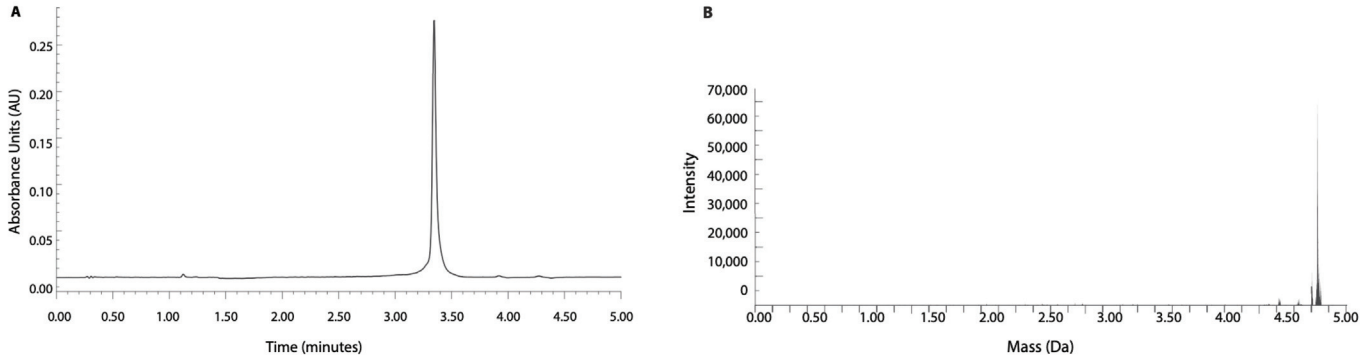
Get to the answer faster with custom oligos by Dharmacon™

Trusted suppliers of long and modified RNA for over 20 years

Flexible design | Rapid turnaround | High yield | Trusted service

Horizon's custom RNA synthesis service offers the flexibility to design long oligos with chemical modifications added at any open position. Our patented ACE-2′ chemistry produces higher yields in less time than any other oligo supplier.

Quality analysis of a custom synthesized 105 nucleotide RNA oligo



(A) UPLC analysis showing >90% pure full-length material. (B) Mass spec analysis illustrating the correct mass.

Contact us to discuss your project.
technical@horizondiscovery.com

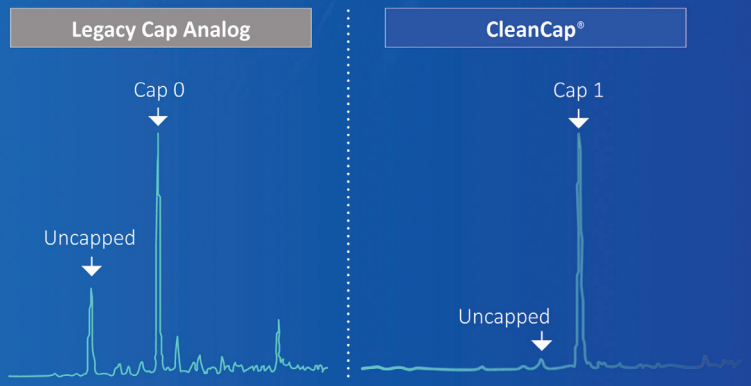
A REVOLUTION
in Co-Transcriptional mRNA Capping

CleanCap® demonstrates superior performance versus legacy co-transcriptional capping methods

	Legacy Cap Analogs	CleanCap®
Natural Cap	No ⊖	Yes ⊕
Immunogenic	Yes ⊖	Reduced Immunogenicity ⊕
Capping Efficiency	~70% ⊖	~95% ⊕
Yield/mL Transcription	1.5 mg/mL ⊖	4 mg/mL ⊕
Cost	3 X ⊖	1 X ⊕
Available Therapeutic Licenses	No ⊖	Yes ⊕

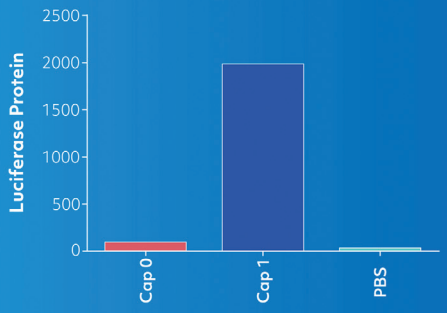
CleanCap®

Successful development of mRNA therapeutics relies on reproducible, high-efficiency production of capped mRNA. CleanCap® uses a new co-transcriptional chemical process for the highest level of mRNA capping:



LC-MS Capping Analysis

CleanCap® gives superior activity *in vivo* by mimicking a natural cap



Luciferase mRNA was formulated with Lunar Lipids and injected by tail vein into mice. At 6 hours, luciferase was measured by western blot in mouse liver. Data courtesy of Arcturus Therapeutics.

CleanCap® results in a natural Cap 1 structure that does not stimulate the innate immune system of the host, resulting in unparalleled efficiency *in vivo*. Legacy co-transcriptional capping methods yield a Cap O, an immunogenic cap structure that is poorly expressed *in vivo*.
The results speak for themselves: **CleanCap®, the next generation of cap analogs, provide the most active and least toxic mRNA for your *in vivo* applications.**

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For more information visit: **trilinkbiotech.com/cleancap**

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